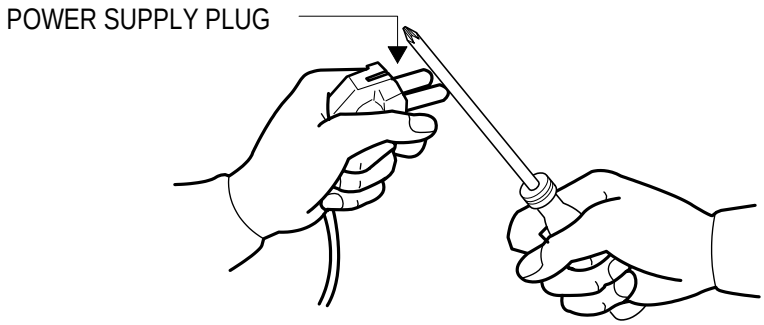
8. Trouble Diagnosis

- As the micom wash machine is configured of the complicate structure, there might be the service call. Below information is prepared for exact trouble diagnosis and suitable repair guide.

Caution for the Repair and Replacement

Please follow below instruction for the trouble diagnosis and parts replacement.

1) As some electronic components are damaged by the charged static electricity from the resin part of wash machine or the human body, prepare the human body earth or remove the potential difference of the human body and wash machine by contacting the power supply plug when the work contacting to PCB is executed.



2) Since AC220~240V is applied to the triac T1 and T2 on P.C.B, the electric shock may occur by touching and be careful that the strong and weak electricity are mixed.

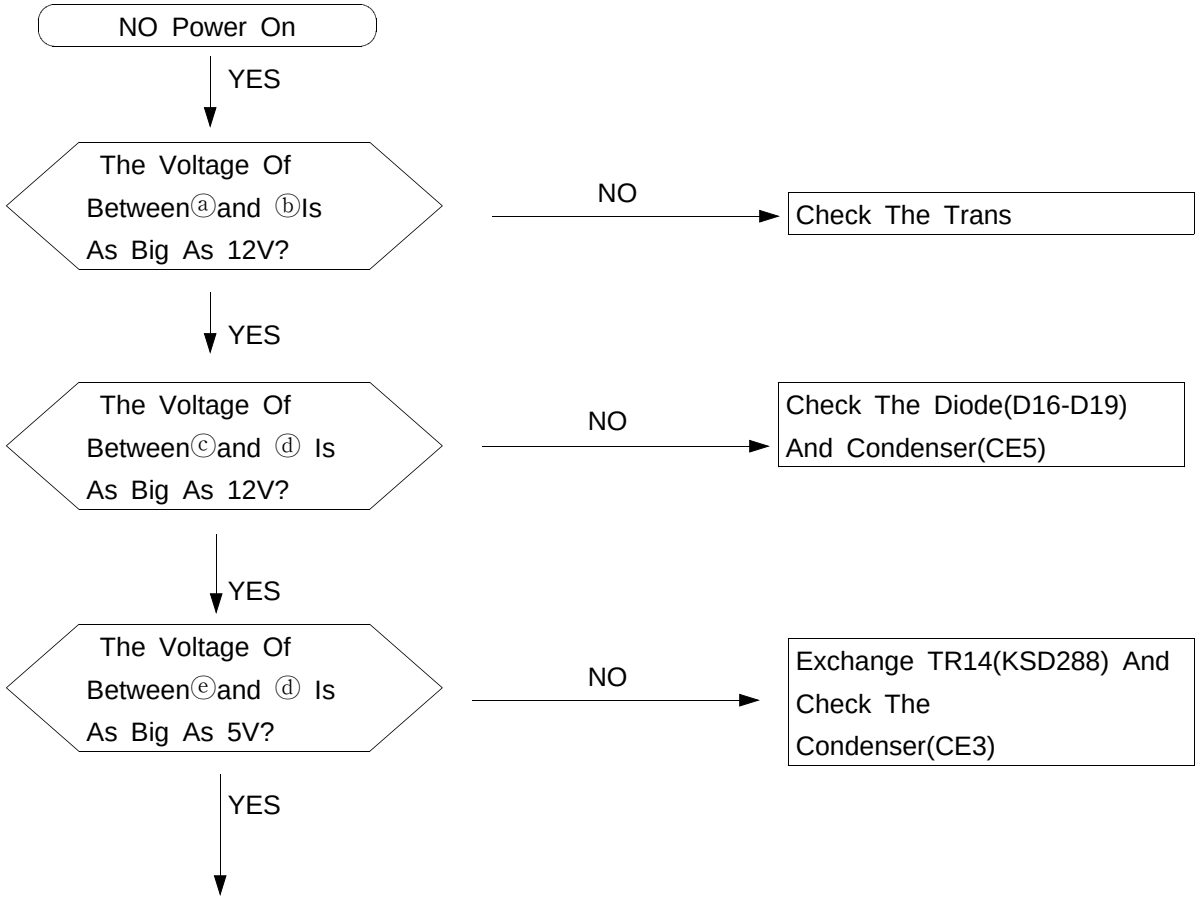
3) As the P.C.B assembly is designed for no trouble, do not replace the P.C.B assembly by the wrong diagnosis and follow the procedure of the trouble diagnosis when the micom is not operated normally.

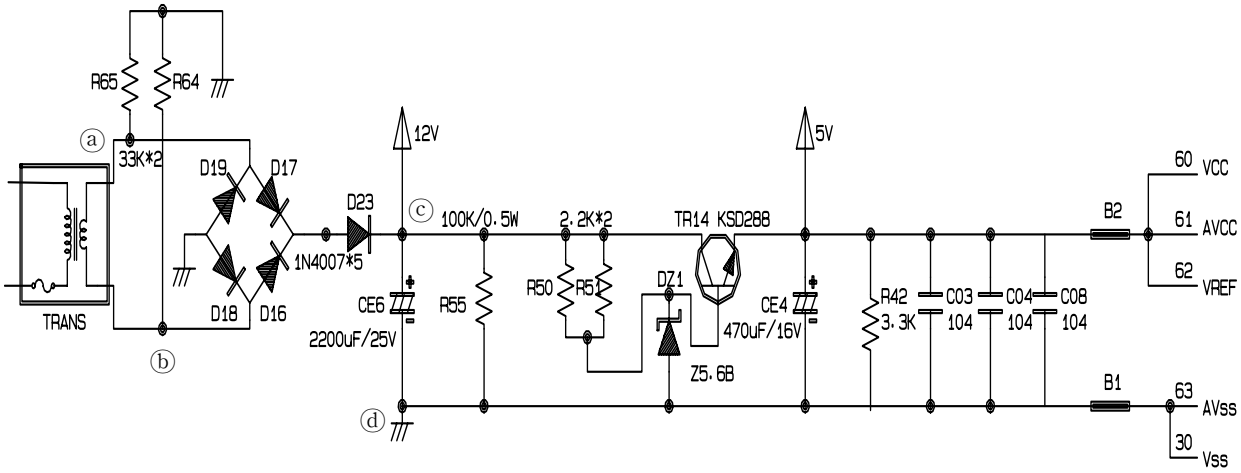
8-1. Trouble Diagnosis

No	Item	Cause and treatment
1	The power is not supplied	- Is the PCB connector connected well? - Is the voltage normal? - Is the power supply plug connected well? - Is the noise filter connected well? - Is the secondary output of the power supply transformation normal? - Is the fuse disconnected? (option) • If above points are not found, the PCB assembly is out of order. Replace it.
2	The water is not supplied.	- Is the knob open? - Did you push START/PAUSE button after selecting the course? - Is the water supply valve connected well? - Is the winding of the water supply valve continuous? - Is the connection and operation of the pressure switch normal? • If above points are not found, the PCB assembly is out of order. Replace it.
3	The wash does not start though the water supply is stopped.	- Is the connection and operation of the pressure switch normal? - Is the pressure switch hose damaged so that the air is leaked? - Is the pressure switch hose bent? - Check the operation of the water level switch. • If above points are not found, the PCB assembly is out of order. Replace it.
4	The drum does not rotate during washing.	- Is the belt connected well? - Is the winding of the motor continuous? (Rotor winding, stator winding, generator) - Is the motor protector normal? • If above points are not found, the PCB assembly is out of order. Replace it.
5	The drum rotates by one direction during washing. (The drum rotates to one direction for SPIN.)	- The PCB assembly is out of order. Replace it. (Inversion relay open trouble)
6	Drainage problem.	- Is the drainage hose bent? - Is the winding of the drainage pump continuous? - Is the drain filter clogged by the waste? • If above points are not found, the PCB assembly is out of order. Replace it.
7	Dehydration problem.	- The unbalance is detected. - Put in the laundry uniformly and start again.
8	Abnormal noise during SPIN.	- Is the pulley nut loosen? - Is the transport safety device removed? - Is the product installed on the level and stable place? (Little noise may be generated during the high-speed SPIN.)
9	Leak breaker or current/leak breaker is down during washing.	<When the leak breaker and current breaker is installed separately> - When the leak breaker is down, check and make the earth of the outlet. - When the current is down, the current is leaked. <Is the breaker down when the leak/current breaker is combined?> - Check the rated capacity of the current and leak breaker. The current breaker may be down due to the lack of the current when the wash machine and other apparatus are used. In this case, execute the cold water wash to check whether the current capacity is lack.
10	The heating is not executed.	- Is the wash heater terminal unplugged? - Is the wash heater normal? - If above points are not found, the PCB assembly is out of order. Replace it.

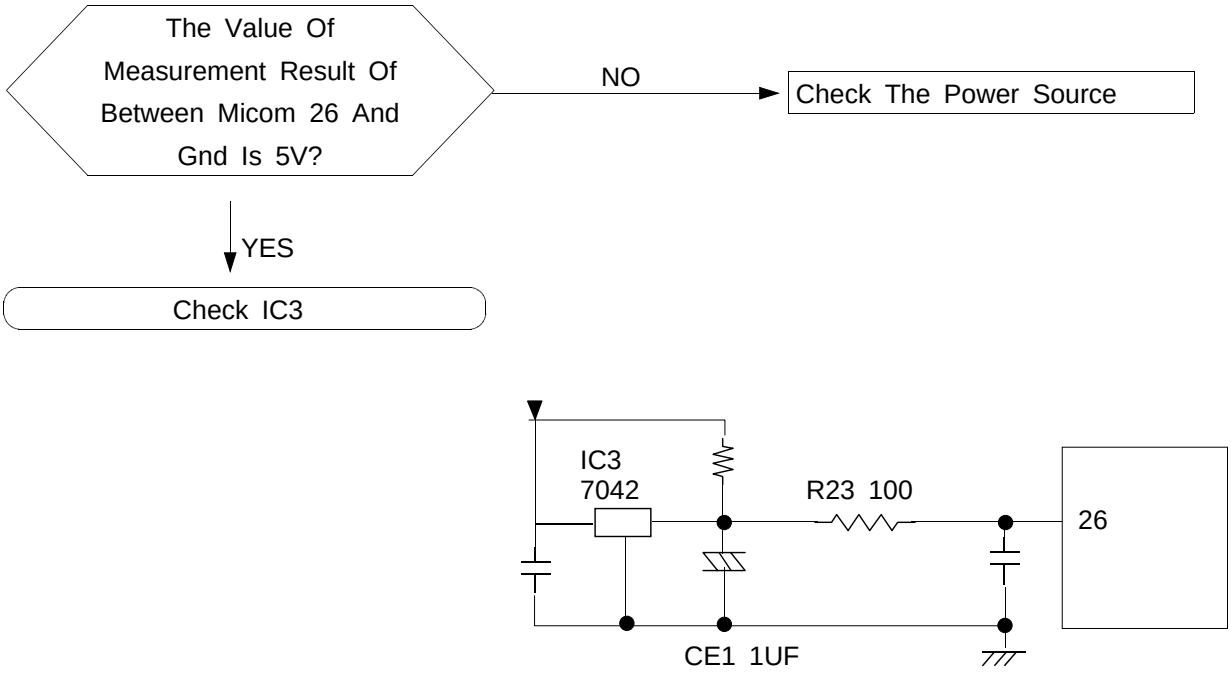
8-2 . Problem Checkking And Method Of Pcb

8-2-1 The Part Of Power Source

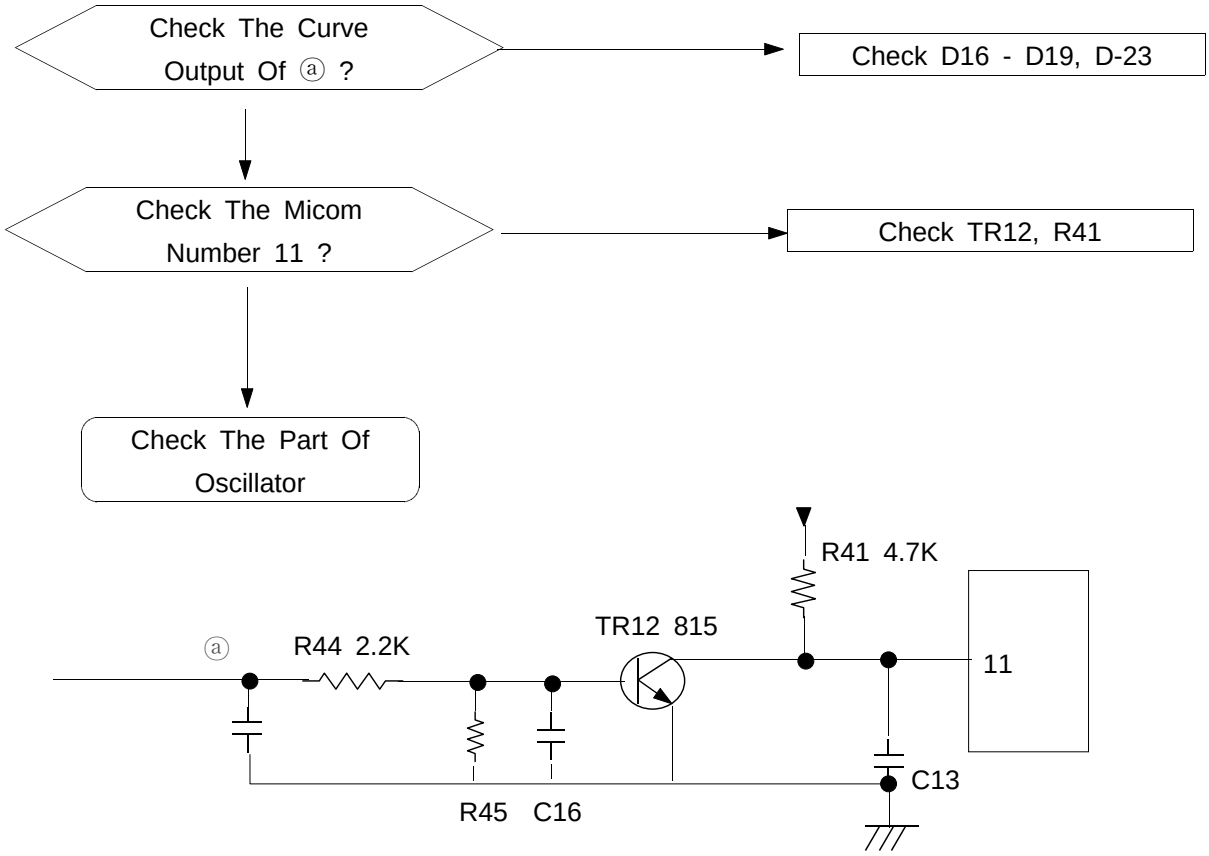

NO Power On
YES
The Voltage Of Between ⓐ and ⓑ Is As Big As 12V?
NO
Check The Trans
YES
The Voltage Of Between ⓒ and ⓓ Is As Big As 12V?
NO
Check The Diode(D16-D19) And Condenser(CE5)
YES
The Voltage Of Between ⓔ and ⓓ Is As Big As 5V?
NO
Exchange TR14(KSD288) And Check The Condenser(CE3)
YES



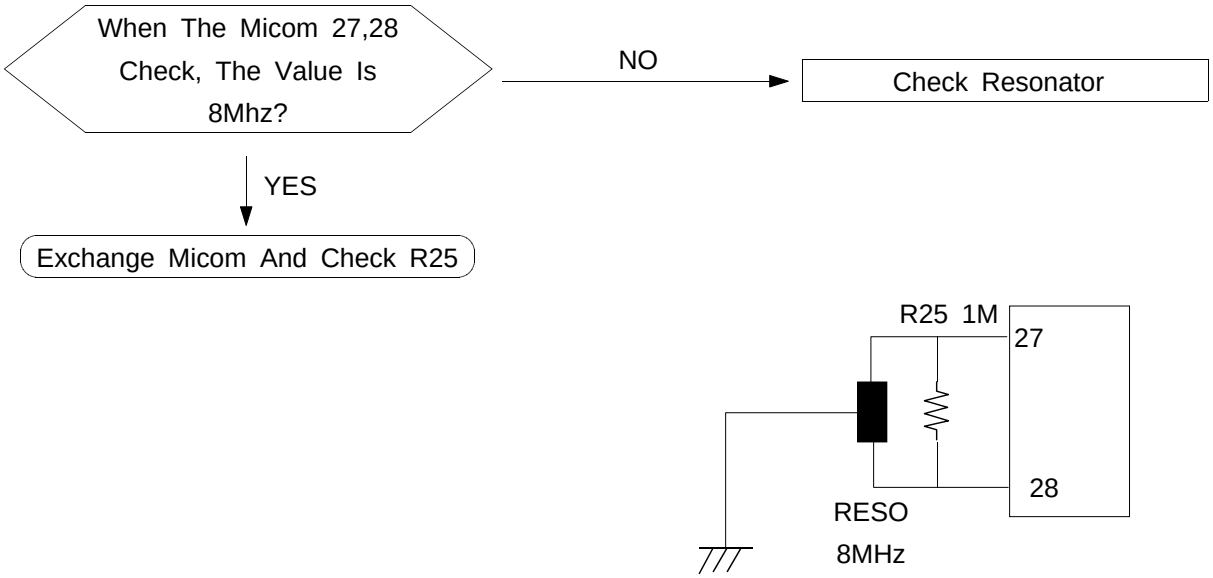
8-2-2. Reset Part



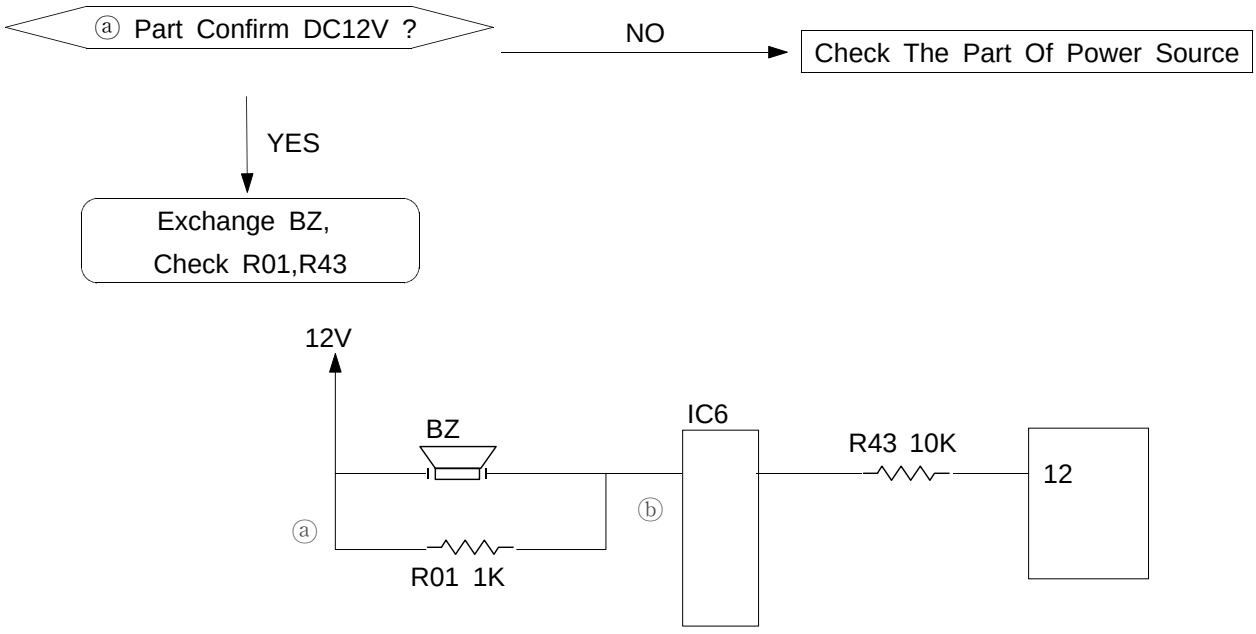
8-2-3. Interrupt Part



8-2-4. Checking The Part Of An Oscillator



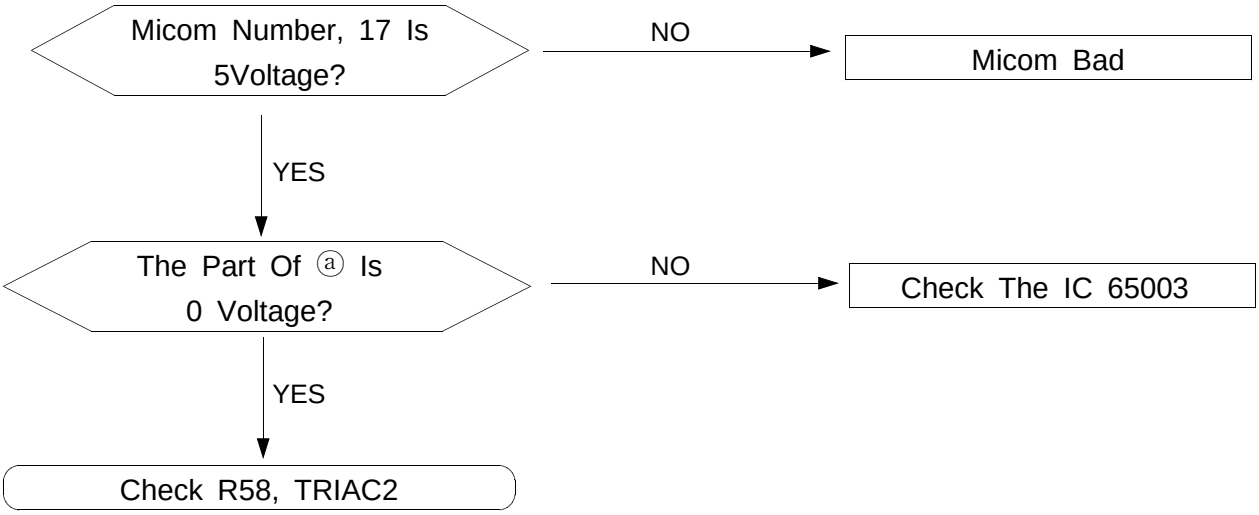
8-2-5. Check The Part Of Buzzer

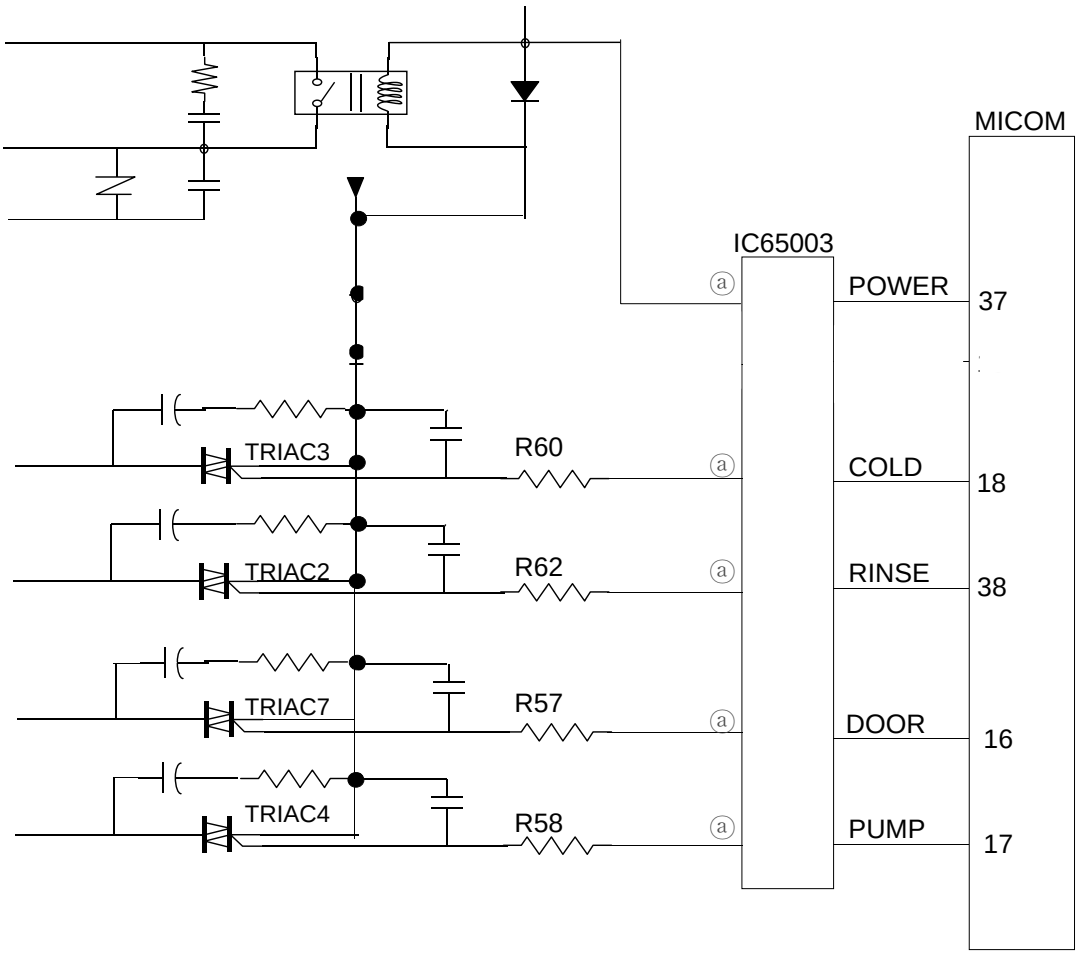


8-2-6. Driving Part Checking

◆ Confirm The Output Of DC5V, When The Every Part Of Micom Number Check, According To The Some Problem Condition

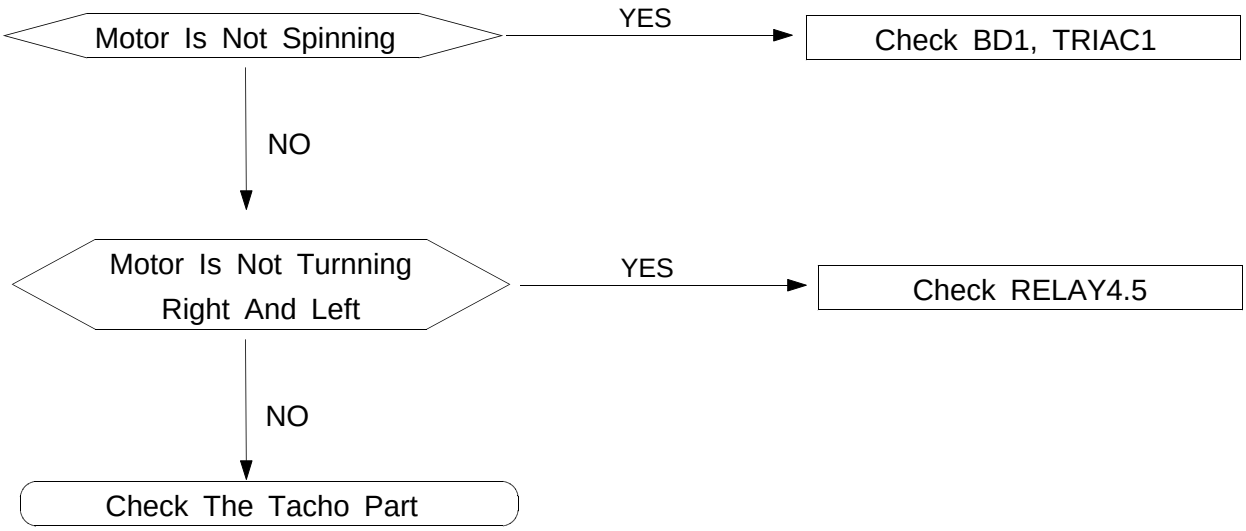
ex) When The Drain Is Not Operating But Pump Motor Is Operating, Check The 5Voltage Of Micom

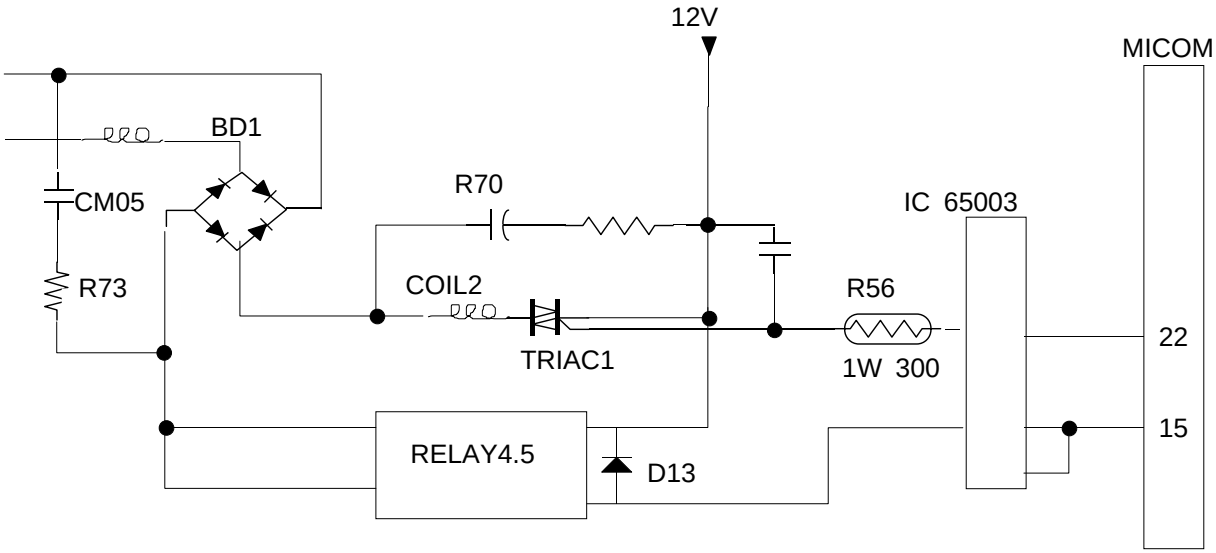




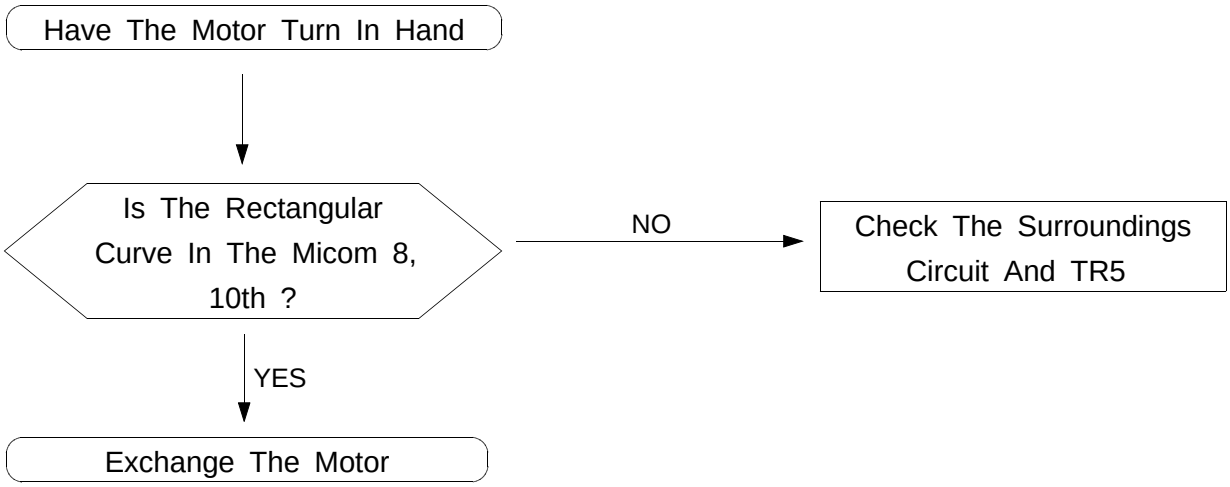
※ **Check The Micom 18th In The Above Method When The Cold Water Is Bad**

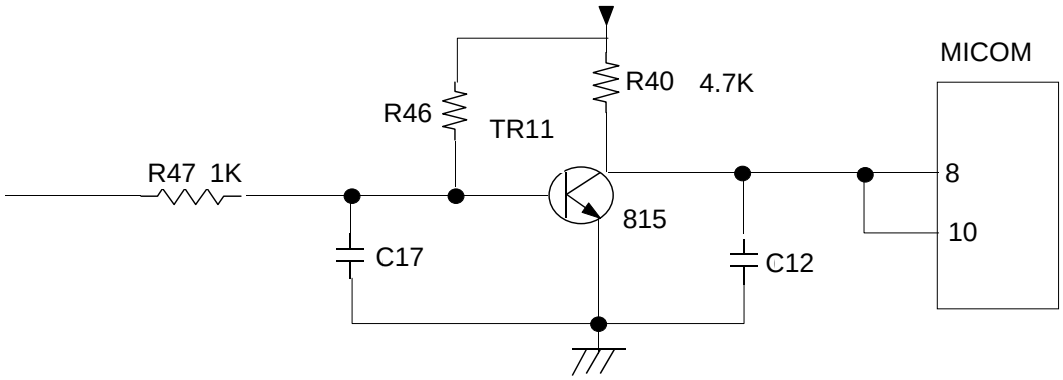
8-2-7. Confirm The Driving Part Of Motor



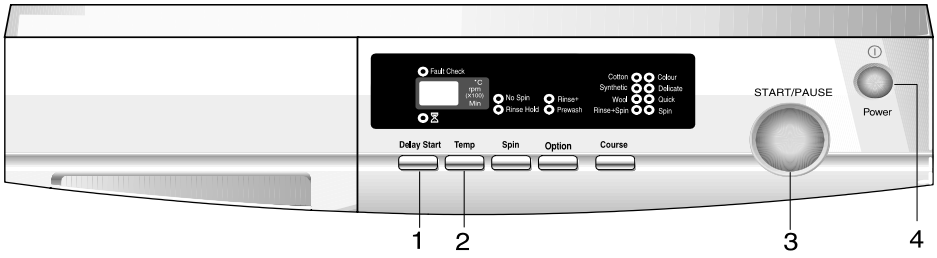


8-2-8. Checking The Tacho Part


Have The Motor Turn In Hand
Is The Rectangular Curve In The Micom 8, 10th ?
NO
Check The Surroundings Circuit And TR5
YES
Exchange The Motor



9. Test Mode



1. Driving Compartment Test Mode

A. Hold down "1" and "2" keys simultaneously and then press POWER S/W "4" on.
(Whole lamps turn on and display show "tl" after 3 Seconds.)

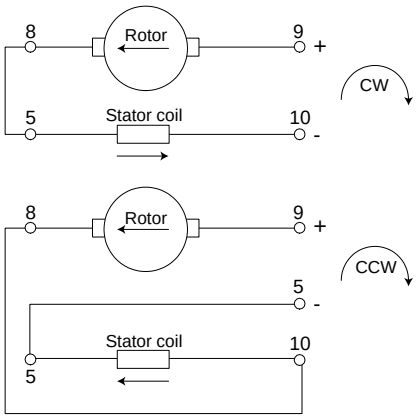
B. The driving compartment can be tested when you press "3" key right after entering into the initial stage of the TEST MODE.

- **Driving Compartment Test**

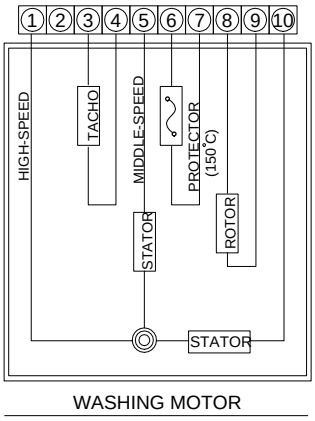
Pre-wash VALVE ON(0.3sec) → OFF(0.3sec) → COLD VALVE ON(0.3sec) → [OFF(0.3sec) → HOT VALVE ON (0.3sec) : ***OPTION***] → OFF(0.3sec) → Rinse VALVE ON(0.3sec) → OFF(0.3sec) → Pump MOTOR ON(0.3sec) → OFF(0.3sec) → MOTOR Left (0.5sec) → OFF(0.5 sec) → MOTOR Right (0.5sec) → OFF(0.3sec) → HEATER RELAY ON(0.3sec) → OFF(0.3sec) → DOOR OPEN (Function continues when door is closed)

10. Designation of Main Components

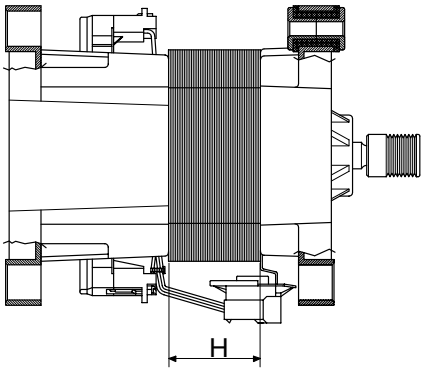
9-1 Normal / Reverse Revolution of Motor and R. P. M. Control



<Figure1>



<Figure2>

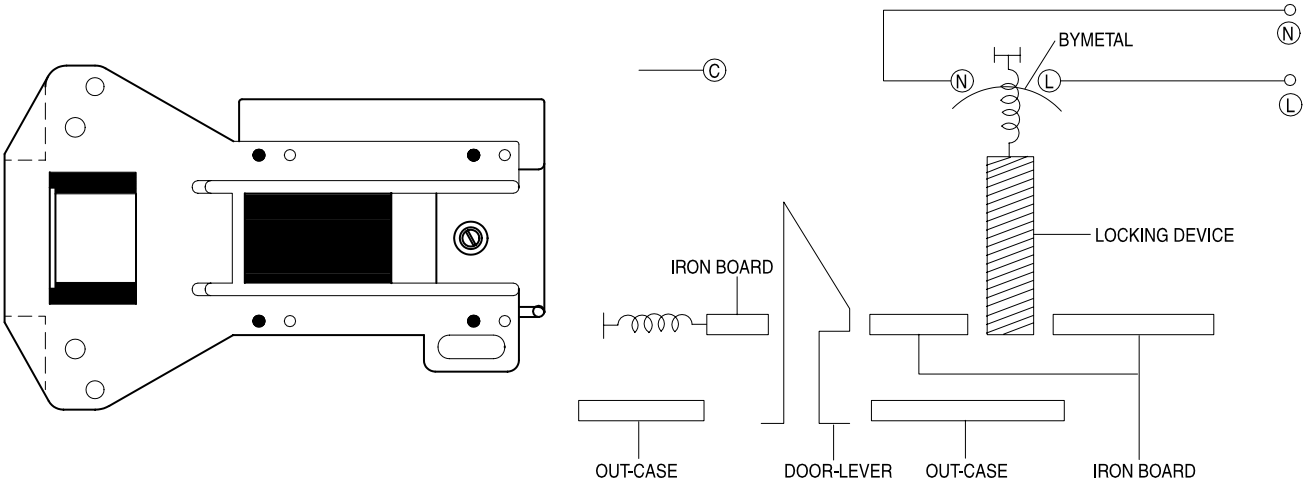


<Figure3>

(± 7%)	STATOR(5.1)	STATOR(5.1)	ROTOR(8.9)	TACHO(3.4)	PROTECTOR(6.7)	"H"(mm)	Code-No.	Remark
	–	1.592Ω	2.094Ω	38.8Ω	0	39	DC31-00002E	S8.3J
Rated value	220~240V/50Hz							

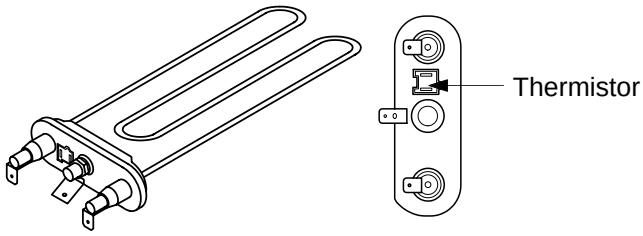
10-2 Door safety Device

When Door is closed, door stay closed. if "set" is operated, power supplied to Ⓝ , Ⓛ wires have bymetal keep the door closed, and electronical power flows between Ⓛ and Ⓒ make it operate.



10-3 Heater

1) Capacity : AC 230V/1900W
2) Location : Bottom of TUB
3) Function : Raise the water temperature
supplied at the wash process.
4) Resistance value : 23~29
5) Thermal Fuse : 128°C



10-4 Detergent tub and water supply value

A Detergent tub is composed of housing and 3 drawers . supplied water flows into the 3 drawer-detergent tub by way of classifier at each washing process.

three open drainage way whith detergent and supplied water by way of connector located under the housing flows into washing tub.

the water supply valve is composed of a hot water valve(1 way) and a cold water valve(3way) and water flow per min in the valve is below.

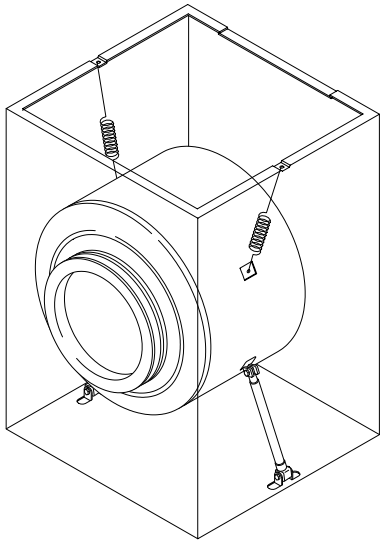
	Hot water valve(1 way)	**Cold water valve(2 way)**	
		V1	V2
water flow(L/min)	10L	10 L	5L
resistance value	4.3㏀	4.2㏀	4.2㏀
power consumption	AC 220v ~ 240V 50/60㎐		
usable water pressure	0.5 ~ 8 ㎏/㎠		

10-5 Shock absorber and buffer spring

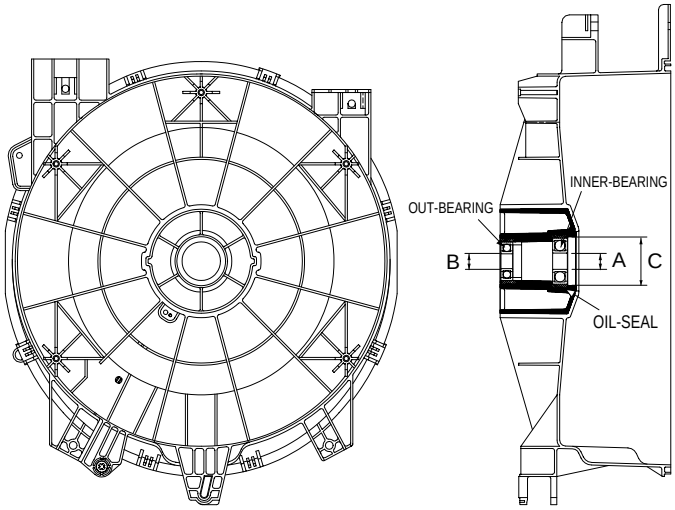
This wash machine is equipped with 2 Shock absorbers with same capacity and with 2 buffer springs. 2 Shock absorber are placed under the tub and outside case , 4 buffer springs are placed on the right and left of the upper side of outside case.

Shock absorber function: during wash, dehydration absorb the shock.
buffer spring: buffering the vibration

device	capacity of Shock absorber
Shock absorber	8±2kg



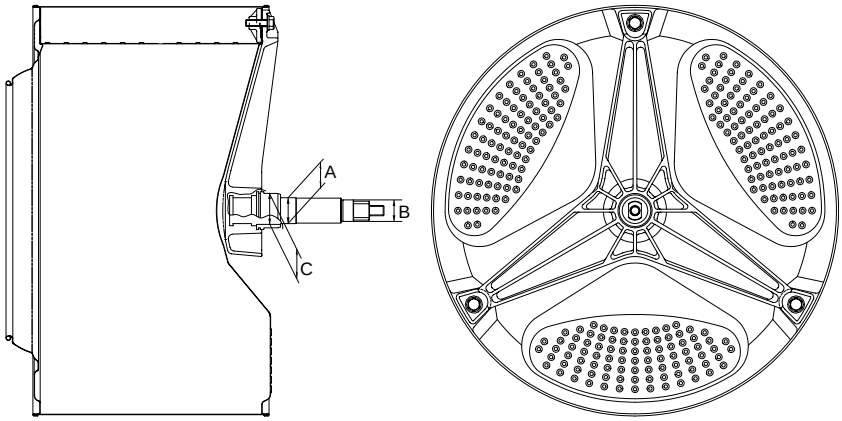
10-6 ASSY-TUB BACK



(unit : mm)

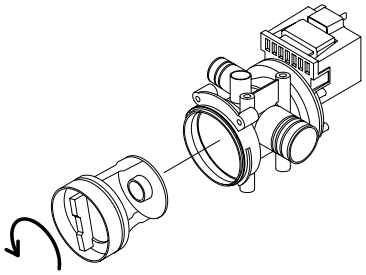
TYPE	INNER-BEARING(A)	OUT-BEARING(B)	OIL-SEAL(C)	Assy-Housing Bearing(D)	Assy-Tub Back	REMARK
I	ø 20	ø 17	ø 24.3	DC97-02133A	DC97-02137A	

10-7 ASSY- DRUM



(unit : mm)

TYPE	(A)	(B)	(C)	CODE-NO.	REMARK
I	ø 20	ø 17	ø 25	DC97-02099A	Lifter type

10-8 ASSY-PUMP DRAIN

1) Capacity : AC 230V 34W
2) Location : Front bottom(R)
3) Resistance :160Ω ~ 190Ω